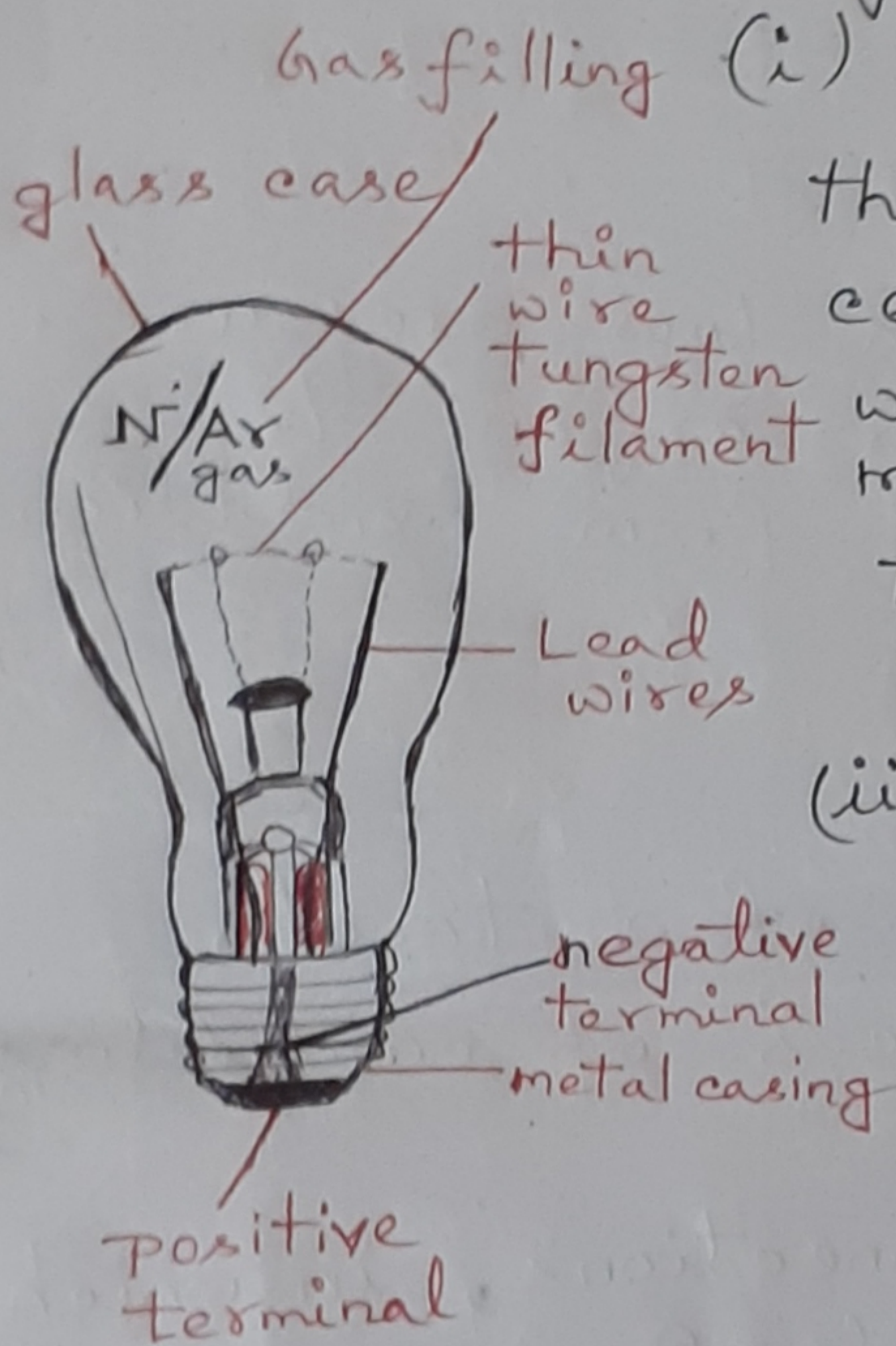


7/10/20

Bulb

An electric bulb is a device which produces light when electricity is passed through its terminals.



(i) The glass bulb has two thick contact wires at the center, with a thin coiled wire attached between them, made up of tungsten metal, this thin wire is called filament.

(ii) One of the thick wires is connected to the metal case at the base of the bulb & the other is connected to the metal tip at the center of the base. These two form the terminals.

(iii) When electricity is passed through the terminals of the bulb, the filament gets heated up & produces light.

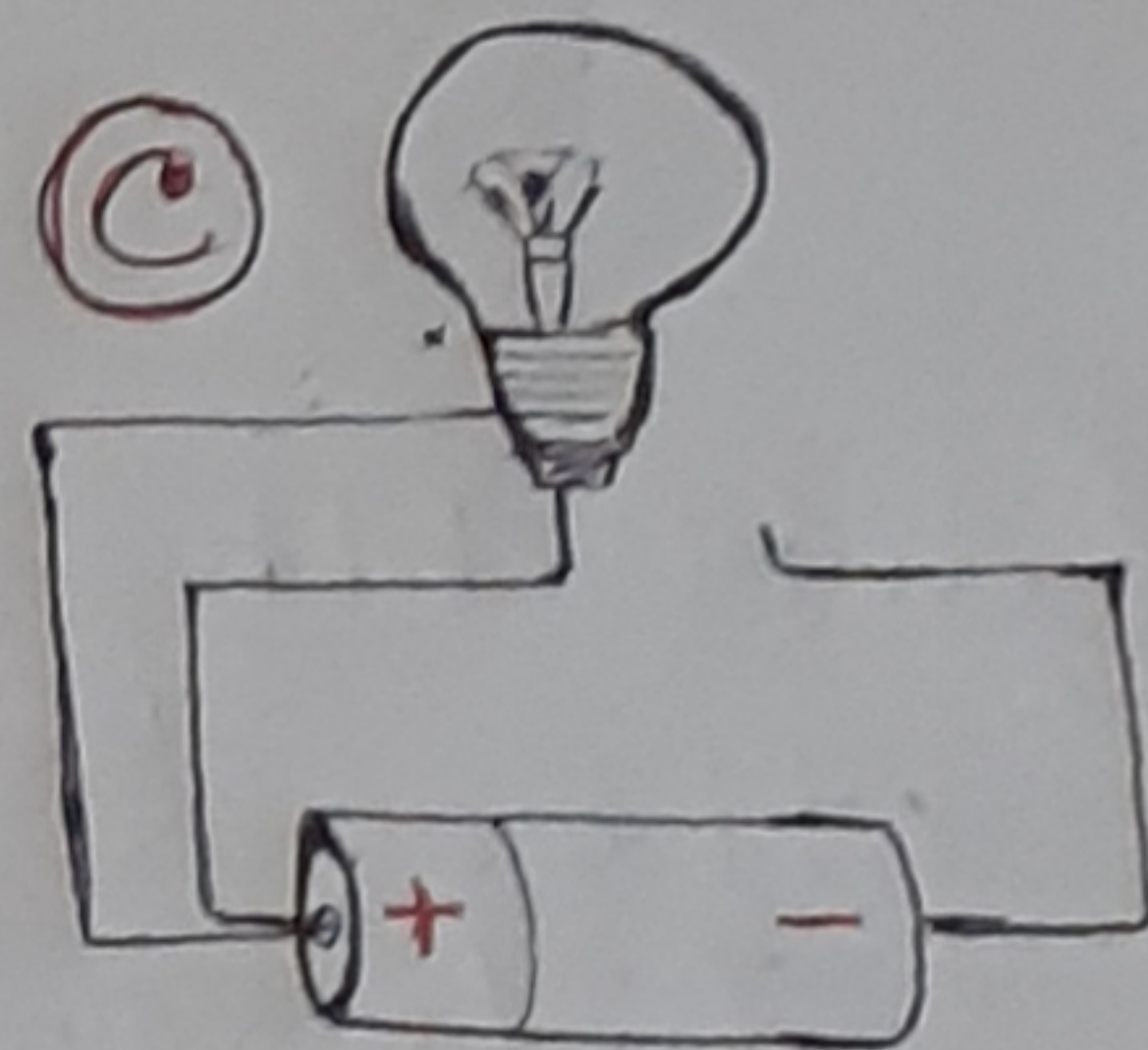
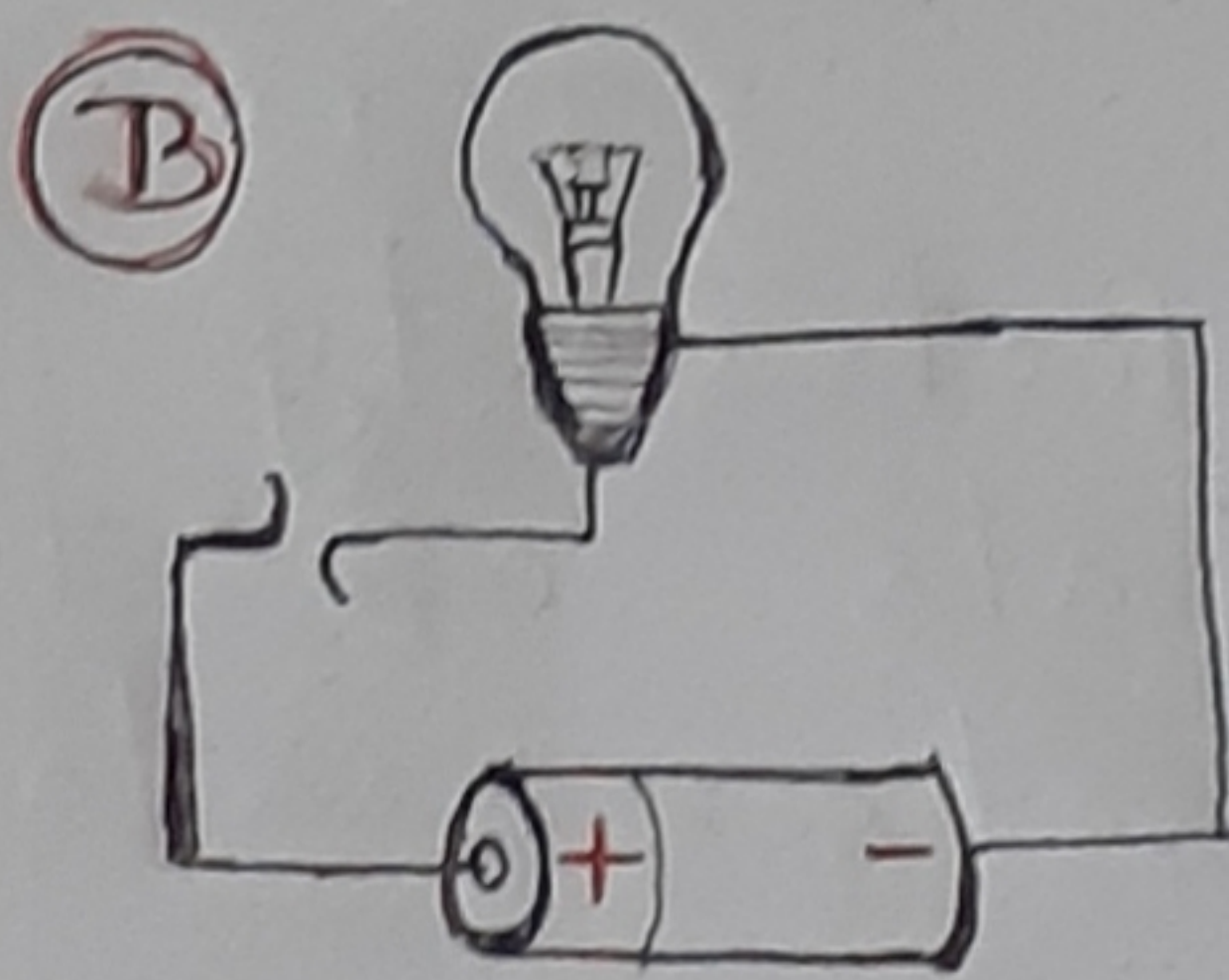
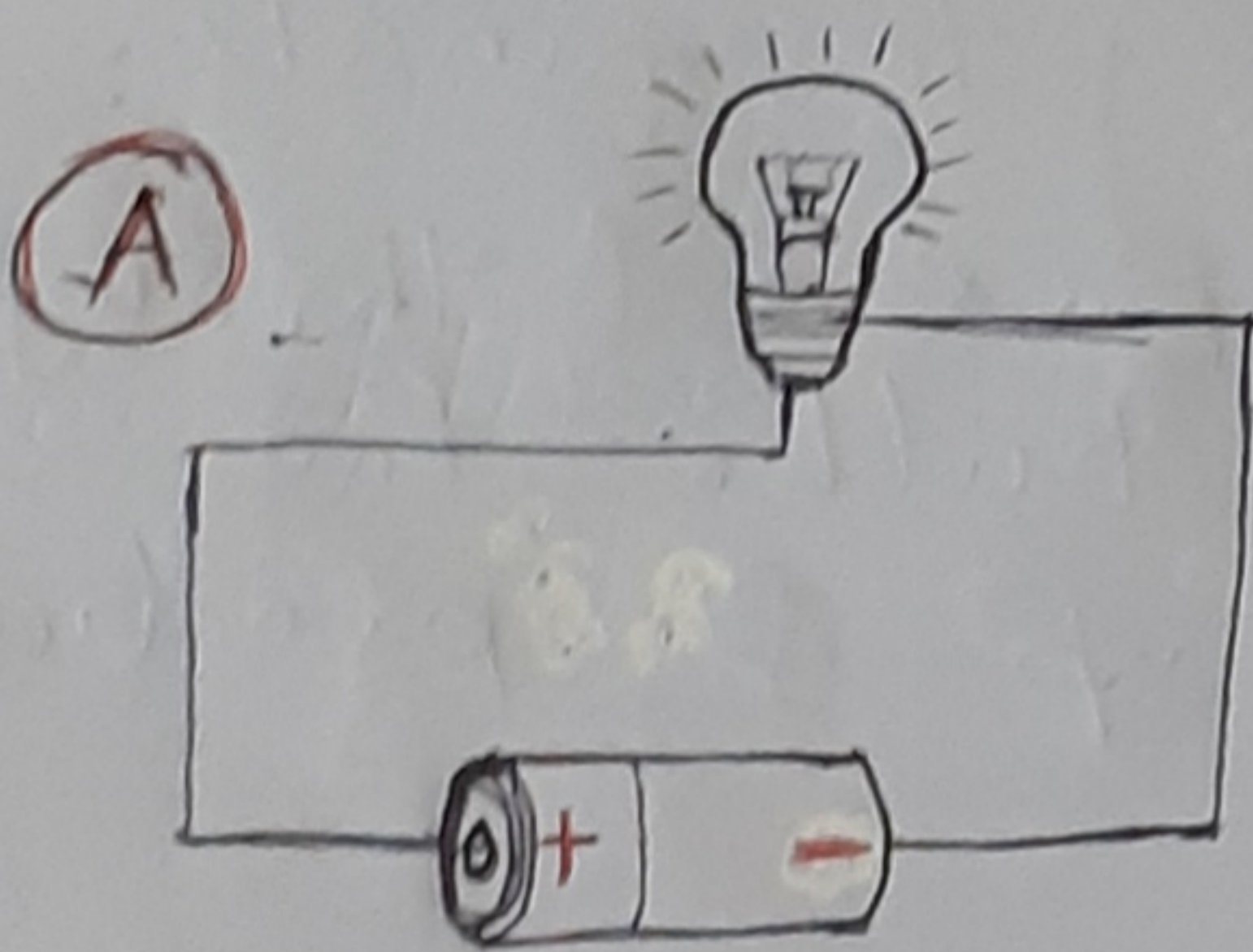
(iv) The glass envelope is filled with the

non reactive gas at a low pressure, such as nitrogen or argon to protect the filament from oxidation.

Hands on activity

Requirements → Bulb of a torch, a battery & few pieces of conducting wires.

Q. Among the three connections, in which case the bulb will glow?



(A) The bulb will glow only in case of A. Here two ends of the filament of the bulb is connected to two different terminals of the battery correctly.

(B) The connection is not continuous. So bulb will not glow.

(C) The two ^{ends of the} filament of the bulb is connected to the same terminal of the battery. So current will not flow & bulb will not glow.

If in case (A), to the first battery an other battery will be added, then the bulb powered by two batteries is glowing brighter, due to the supplying of more electrical energy to the bulb.

Symbols